



This article is the second of a series of articles looking at medical issues in Europe.

## European health challenges

Tony Smith

Middle aged men and women in Britain are three times as likely to die from coronary heart disease as their counterparts in France, despite being separated by only a few miles of English Channel. As far as heart disease is concerned (fig 1) Europe is clearly divided into northern and southern belts with very different mortality rates. Breast cancer kills twice as many women in Britain as in Greece. But the French and the other southern Europeans don't live any longer: they die of different diseases such as alcoholic cirrhosis of the liver and from road accidents.

These contrasts in health were until recently of interest mainly to epidemiologists, but they are now becoming of wider concern for two main reasons. Firstly, as Britain moves slowly to closer integration into the European Community its citizens are simply becoming more interested in their neighbours—and wanting some of the good things they see over the metaphorical fence. Secondly, the integration process is highlighting the differences between the countries, and their health and health care systems are seen as strikingly varied in a continent that is moving towards a monoculture in finance, television, sport, and politics. Pressure will come increasingly on European countries to bring their health services and the health of their citizens up to at least European average levels. So what are these levels?

### Monitoring health

Monitoring the health of the countries of Europe has been given a substantial impetus by the World Health Organisation's Health for All programme. This global programme as applied to Europe was agreed as a policy in 1984 by the 32 member states of the European region of WHO, which extends from Greenland to the Soviet Union and the Mediterranean. The programme set 38

### Selected targets from WHO's Health for All programme

- Differences in health status between countries and between groups within countries should be reduced by at least 25% by the year 2000 by improving the health of the disadvantaged (target 1)
- The average years people live free from major disease or disability should be increased by at least 10% (target 4)
- There should be no indigenous measles, polio, neonatal tetanus, congenital rubella, diphtheria, congenital syphilis, or malaria in the region by the year 2000 (target 5)
- Mortality from diseases of the circulatory system and from cancer in people under 65 should be cut by at least 15% (targets 9 and 10)
- Clear targets should be set by member states for positive health behaviours such as there being 80% of non-smokers in the adult population and for decreases in damaging behaviour such as overuse of alcohol (targets 16 and 17)
- Clear targets should also be set for making the environment more healthy by achieving safe drinking water for the whole population and by reducing air pollution and the pollution of rivers and seas (targets 18-25)

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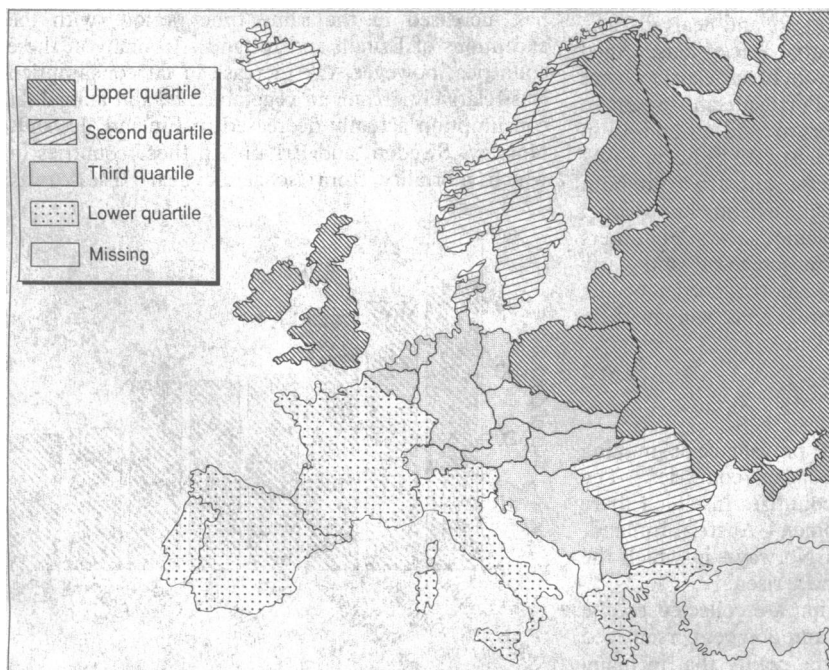


FIG 1—Map showing mortality from ischaemic heart disease in Europe (expressed by quartiles)

targets to be achieved by specific years (1990, 1995, and 2000) by all the countries of the region under five broad headings: equity, morbidity and mortality, lifestyle, environment, and health services, and it introduced indicators to measure movement towards these targets (box).

In practical terms the adoption of this policy means that the health authorities of the 32 nations of Europe have undertaken to collect data ranging from infant and maternal mortality, life expectation, mortality from heart disease and the common cancers, and mortality from road accidents to immunisation rates against infectious diseases, the proportion of dietary energy obtained from fat, and the organisation of primary medical care.

Each of the 32 European countries that agreed the policy also agreed to draw up its own strategy for achieving the goals. This requires each country to record its current standing on each of the measures—from mortality to levels of pollution of the sea and rivers—to set out what actions are needed to achieve the required improvements, and to establish a programme to ensure that the changes are made. The deadline for drawing up the programme was 1990, and most of the 32 have produced health charters of some kind. Britain is one of the laggards; early this year the only part of the United Kingdom to have met the deadline was Wales, which has a clearly set out programme covering all the targets. In midsummer the British government produced its own belated response for England and Scotland. *The Health of the Nation* identified areas for action but proposed further consultation before setting a full range of specific, numerically precise health targets and the dates for achieving them. Health targets have come on to the agenda, but only at the last minute.

## Demographic data

In 1990 the population of Europe was 846 million, and with the exception of Turkey all the nations had reached what demographers term the post-transitional stage, with a low fertility and a low mortality. Nevertheless, by the year 2025 the population is expected to have reached 968 million (fig 2). From the viewpoint of health planners the more important statistic is that between 1990 and 2025 the numbers of people aged over 60 will have risen from 140m to 224m, an increase of 62%. (This figure is not an estimate but a fact—all these 224m people are alive at the present time and their life expectation is known fairly accurately.) Applying existing data about the age related incidence of common diseases to these changes in the age profile of the region shows that there will be a 50% increase in demand for treatment of coronary heart disease and smaller but still substantial increases in the demand for treatment of diabetes and the common cancers. These dramatic increases could, however, be avoided if changes in lifestyle could be achieved sufficient to reduce the incidence of the common diseases by a substantial fraction—ideally by one third.

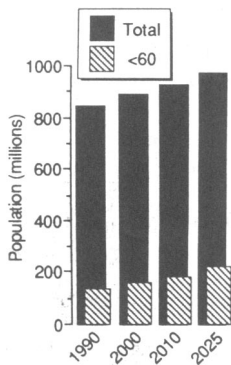


FIG 2—Population of Europe and proportion over 60

TABLE I—Age adjusted mortality from ischaemic heart disease (1986 data)

	Men	Women
France	115	49
Greece	123	50
Italy	141	70
Netherlands	238	99
Germany	242	108
Denmark	333	164
United Kingdom	355	161

TABLE II—Age adjusted mortality from stroke (1986 data)

	Men	Women
Sweden	78	66
Denmark	80	66
Netherlands	80	64
United Kingdom	110	97
Hungary	216	165
Portugal	253	191

## Variations in disease

Reducing the incidence of common diseases by one third in 35 years might seem a totally unrealistic objective—except that within Europe the incidence of these diseases already varies to that extent.

Heart disease accounts for 35% of deaths in men and 30% in women aged 25-64, but these are average figures. Age adjusted mortality for ischaemic heart disease in men ranges from 115 in France and 123 in Greece to 223 in western Germany and 355 in the United Kingdom. The western European league leader is Finland, but both Czechoslovakia (409) and the Soviet Union (486) have even higher rates (table I). The rates in women are roughly half those in men.

For stroke, by contrast, the northern European countries do rather better: Sweden and the Netherlands have an age adjusted mortality for men of around 80, the British figure is 110, and the highest rates (253) are in eastern Europe and Portugal (table II). Similar data are found for women.

Within Europe as a whole mortality from cancer has been increasing since 1970, partly as a result of declines in deaths from stroke and heart disease. Total mortality from cancer shows less variation from country to country than mortality from stroke and heart disease, but there are some substantial exceptions. Aged adjusted mortality in women from breast cancer ranges from around 20 in Greece, Portugal, and Spain to around 28 in France and Norway and around 40 in Denmark. Britain has the highest rate in Europe—42 per 100 000 (fig 3). Heart disease and stroke are both substantially preventable by using existing knowledge, and the same is true of at least some cancers. For others mortality can be reduced by screening and early treatment. These are the challenges that need to be met in the coming decades, some progress is being made in changing health related behaviour.

## Smoking and alcohol

In the past 25 years or so the prevalence of smoking has declined in most European countries. The exceptions have been those countries in which there was an initially low rate in women—Austria, Finland, western Germany, Italy, and Norway—in which the numbers of women smoking have risen.

Data on alcohol consumption are collected by the industry and are given as consumption per person aged over 15. Such data conceal the reality that in many countries around 10% of the population drink half the

total amount of alcohol consumed and many adults (up to 50% in some countries) drink no alcohol at all. Between 1980 and 1986 most of the countries with high rates showed some decline, around 10% in most cases. Consumption rose, however, in some countries, including Denmark, Portugal, and Switzerland. Britain is around the midpoint of the European league table.

## Accidents

Improvements in the control of infectious diseases have made accidents the leading cause of death in children and young adults, and road accidents account for around half the total of accidental deaths. Nevertheless during the 1980s overall mortality in Europe from road accidents declined by 18%. Low rates (below 10 per 100 000) were seen in Britain and the Scandinavian countries while relatively high rates (between 15 and 20 per 100 000) were reported from Greece, Belgium, France, Hungary, and Portugal.

Accidents in the home affect mainly the under 5s and the over 70s, in whom falls are the main cause of injury. Accidents at work account for only a fraction of occupational morbidity and mortality, much of which is related to occupational disease.

## Diet

The contribution of variations in national diets to the differences seen in Europe in mortality from diseases such as ischaemic heart disease and breast cancer remains controversial. The main focus of attention in recent years has been on fats, with the northern European countries consuming large amounts of animal and dairy fats, whereas the southern countries use more vegetable fats such as olive oil. The goal set by WHO for fat consumption is that it should contribute between 20% and 30% of the total energy consumption, but it has set an intermediate target of 35%. The current data show that southern European countries such as Turkey and Portugal have low figures while the northern European countries have high consumptions—especially of saturated fats. Nevertheless the picture is not as clear as is sometimes suggested by the health campaigners.

Epidemiologists are struggling to explain those data showing that in all countries with a declining mortality from ischaemic heart disease the total fat consumption has increased in the same time period (with the exceptions of Britain and Iceland). In many of these countries, however, the increase in fat consumption was relatively greater in vegetable fat, and animal fat consumption actually decreased in Finland, Iceland, Norway, Sweden, and Britain. In those countries in which mortality from ischaemic heart disease was

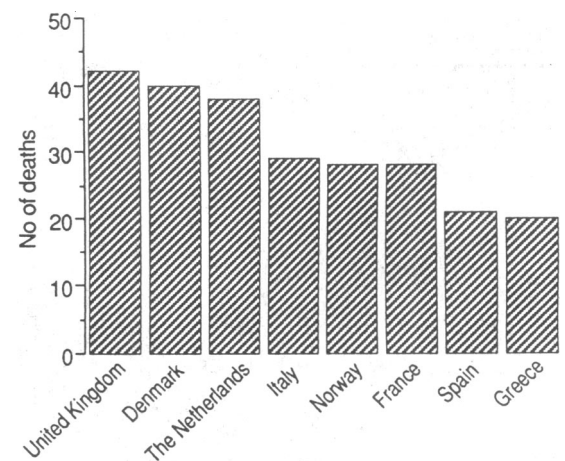
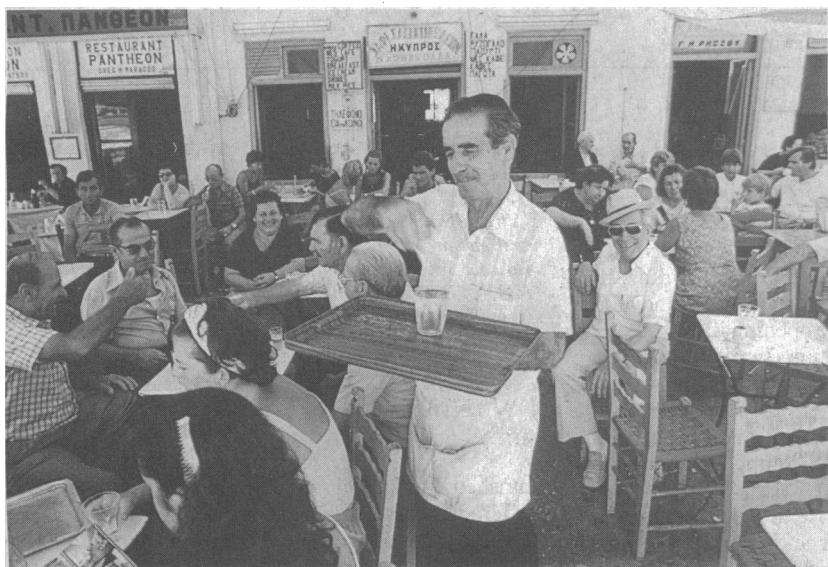


FIG 3—Mortality from breast cancer in eight European countries



SALLY AND RICHARD GREENHILL

Why are the Greeks so healthy?

either static or increasing the consumption of total fat and animal fat had also risen (with the exceptions of France and Yugoslavia).

### Life expectancy and happiness

Life expectancy at birth is a crude measure of health, and the whole European region has long since passed the global target of 60 years. Between 1970 and 1985 life expectancy at birth increased by around 2.7 years for the whole region—to around 74 years. The trend is now slowing down, however, as the natural life span is approached. The small scope for further improvement is shown by a calculation: if infant mortality was abolished the resulting increase in life expectancy would be less than one year. Nevertheless there is still a substantial difference in life expectancy between men (70.6 years) and women (77.3 years), much of which is attributable to sex differences in lifestyle (smoking, alcohol, and violent behaviour) and is in theory amenable to change. Differences in life expectancy between countries in Europe are relatively small (fig 4), reflecting the progress that all have made towards achieving a natural lifespan for their citizens. Variations in national cultures have a greater effect on the causes of death than on overall lifespan: the variations within Europe in death rates from individual diseases are still substantial.

Health educators are sometimes confronted with the comment that there is little point in extending the lifespan if the extra years are spent struggling with physical or mental disabilities. Clearly the target should be to prolong the life expectancy free of disability, a measure that has been promoted by WHO as a preferred measure of the outcome of attempts to improve health. Attempts have been made to use this measure in England, France, and the United States. The data suggest that advances in reducing mortality have been accompanied by slower progress in reducing morbidity. People live longer but have to put up with disability for longer, too. Over the 10 years between 1976 and 1985 in England the absolute number of years to be lived with disability increased by 1.3 years in men to 13.1 years and by 2.2 years in women to 16.2 years. Broadly comparable data have been reported from France, where women may expect to have 11.7 years of disability and men 8.8 years.

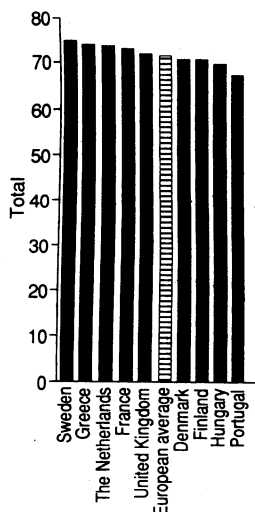


FIG 4—Life expectancy at birth in selected European countries and European average

This prolongation of disability has been seen by some authorities as a transitional phase. Since the natural lifespan free of disease is limited genetically to around 85 years, improved health should lead to progressive postponement of the onset of degenerative diseases such as arthritis and atherosclerosis, and this should eventually "square off" the morbidity curve until the period of disability becomes only a few months. Whether this optimistic viewpoint is correct will become apparent in the next few years.

### Conclusion

The countries of Europe share the same health problems—a growing number of old people and an ever increasing range of medical interventions from which they can benefit. A substantial increase in demand seems inevitable.

One possible glimmer of hope for the health planners is that the incidence of some of the major diseases might be reducible in those countries with high rates. Mortalities from stroke and heart disease have fallen in many countries as have both mortality and morbidity from road accidents. Full use of epidemiological data may lead to more preventive strategies. Sadly, Britain, as is so often the case, has been dragging along behind the rest of Europe in recognising the need for a health policy and setting targets for the immediate future.

The data in this article are taken from statistics collected and analysed by the World Health Organisation Regional Office for Europe and published in two reports:

Van Oyen HJ. *Health for all in Europe: an epidemiological review*. Copenhagen: WHO, 1990.

WHO Regional Office for Europe. *Monitoring of the strategy for health for all by the year 2000. Part 1: the situation in the European region, 1987/88*. Copenhagen: WHO, 1989.

Data are also published by WHO Europe on a diskette: Eurostat (HFA Indicators) Programme.

### Update box for *Oxford Handbook of Clinical Medicine* (2nd ed), p 388

#### Immunotherapy for metastatic hypernephromas

Metastatic disease from a hypernephroma is one of the few indications for considering immunotherapy with interleukin 2, for which response rates of 20-30% have been observed.<sup>1,2</sup> Traditional chemotherapy and radiotherapy give disappointing results against such metastatic disease.

Side effects of interleukin 2 include rigors (intravenous pethidine is useful for amelioration); myalgia; renal failure; and the vascular leak syndrome, which may require treatment with colloids and dopamine (interleukin 2 stimulates the release of tumour necrosis factor and cytokines, which make vessels permeable to macromolecules).

The overall five year survival for all patients is 35-40%. —J M LONGMORE

#### Principal sources

- 1 Hamblin TJ. Interleukin 2. *BMJ* 1990;300:275-6.
- 2 Hamblin TJ. Interleukin 2. *BMJ* 1990;300:745.

Anyone may submit an update box; all boxes are peer reviewed.